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BETTT, JACOB F				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/812,901

**Applicant(s)**

TUCKER ET AL.

**Examiner**

Jacob F. Betit

**Art Unit**

2164

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(c), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(c) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 30 August 2007 has been entered.

***Remarks***

2. In response to communications filed on 30 August 2007, claims 23-30 have been amended and claims 31-32 have been added per the applicant's request. Claims 1-32 are presently pending in the application of which claim 32 has been withdrawn.

***Declaration Under 37 CFR §1.131***

3. The declaration filed on 30 August 2007 under 37 CFR 1.131 has been considered but is ineffective to overcome the Nayak (U.S. patent application publication No. 2005/0222975) reference.

4. The evidence submitted is insufficient to establish a conception of the invention prior to the effective date of the Nayak reference. While conception is the mental part of the inventive act, it must be capable of proof, such as by demonstrative evidence or by a complete disclosure to another. Conception is more than a vague idea of how to solve a problem. The requisite means themselves and their interaction must also be comprehended. See *Mergenthaler v.*

*Scudder*, 1897 C.D. 724, 81 O.G. 1417 (D.C. Cir. 1897). The applicant has failed to show how the evidence relates to the claimed invention including showing where the requisite means can be comprehended from the evidence provided. The description in the conception document has been so heavily redacted that is difficult to determine if the document relates to the basic field of invention let alone of the document is describing conception of the invention as claimed.

5. The evidence submitted is insufficient to establish diligence from a date prior to the date of reduction to practice of the Nayak reference to either a constructive reduction to practice or an actual reduction to practice. No statement regarding diligence was made.

#### ***Election/Restrictions***

6. Claim 32 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 14 December 2007.

#### ***Claim Rejections - 35 USC § 101***

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claims 23-30 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. In paragraph 0021 of the specification the applicant has provided evidence that the applicant intends the medium to include signals as such the claim is drawn to a form of energy. Energy is not one of the four categories of invention and therefore

this claim is not statutory. Energy is not a series of steps or acts and thus is not a process.

Energy is not a physical article or object and as such is not a machine or manufacture. Energy is not a combination of substances and therefor not a composition of matter.

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1, 2, 3, 5, 9, 23 - 25, and 28 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by US patent application publication No. 20050222975, known hereafter as Nayak.

*As per independent Claims 1, 5 and 23, Nayak teaches the limitations as follows:*

receiving a first search query having a first content comprising a plurality of components(Para 34);

rewriting the first search query into a modified search query;

mapping the first search query to the modified search query in a cache memory; {Para 46 of

Nayak, beging on the third line from the bottom of the first column “After a query is expanded, the expansion component can provide the expanded expression to a shared memory 1014. The query expander client component 1012 can retrieve the expression from the shared memory 1014 and load it into keyword cache 1016, which can be

utilized by execution engine component 770 to query the compressed index 760.”}

receiving a second search query having a second content;

determining whether at least a portion of the second content is substantially identical to the first content;

responsive to the at least one portion of the second content being substantially

identical to the first content, substituting the modified search query for the at least one

portion of the second content to form a modified second search query; and

issuing a search of the modified second search query having the substituted

modified search query to return one or more search results as responsive to the received second search query.{Para 46 of Nayak, “The optimized query can then be

passed to execution engine component 770 for execution. The query can be executed at that time or alternatively the query can be expanded first. Query expander client component 1012 can receive the index query string from the execution engine component 770. Subsequently, the expander client component 1012 can check to determine whether an expanded query is located in the keyword cache 1016. Keyword cache 1016 provides a very fast memory that the execution engine component 770 can utilize. If the expanded query is located in the keyword cache the execution engine component 770 can simply retrieve the expanded query from the cache.”}

*As per dependent Claims 2 and 24, the limitation are taught as follows:*

*See the claims 1 and 23 rejection above.*

*As per dependent Claims 3 and 25, the limitations are taught as follows:*

The method of claim 1, further comprising:

responsive to the second content not comprising any portion that is substantially identical to the first content, issuing a search of the received second search query to the backend search system. {Para 46 shows that the query is always eventually executed on the backend search system}

*As per dependent Claim 9 and 28, the limitations are taught as follows:*

*See Claim 1 rejection above.*

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1-10, 20, and 22-30 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by US patent No. 6,006,225, known hereafter as Bowman.

*As per independent Claims 1, 5 and 23, Bowman teaches the limitations as follows:*

receiving a first search query having a first content, comprising a plurality of components ;  
rewriting the first search query into a modified search query; {Col 13 line 65-col 14 line 15}

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mapping the first search query to the modified search query in a cache memory; {Col 8 lines 44-48 Teaches logging all queries, which include those which have been rewritten, col 8 lines 15-19 teach generating the mapping and storing it in a query correlation table, and col 5 line 37-38 teach the correlation table being stored in a cache memory}

receiving a second search query having a second content;

determining whether at least a portion of the second content is substantially identical to the first content;

responsive to the at least one portion of the second content being substantially identical to the first content, substituting the modified search query for the at least one portion of the second content to form a modified second search query; and

issuing a search of the modified second search query having the substituted modified search query to return one or more search results as responsive to the received second search query. {Col 6 lines 19-31 and Figure 1 item 133 is the backend data system}

*As per dependent Claims 2 and 24, Bowman teaches the limitations as follows:*

*See the claims 1 and 23 rejection above.*

*As per dependent Claims 3 and 25, Bowman teaches the limitations as follows:*

The method of claim 1, further comprising:

responsive to the second content not comprising any portion that is substantially identical to the first content, issuing a search of the received second search query to the backend search system. {Col 5 line 61- Col 6 line 2}



*As per dependent Claims 4 and 26, Bowman teaches the limitations as follows:*

The method of claim 1, wherein the cache memory comprises a look-up table for the mapping.  
{Abstract, or Col 2 lines 47-50}

*As per dependent Claim 6, Bowman teaches the limitations as follows:*

The method of claim 5, wherein the backend data system is physically  
apart from the cache memory and comprises one or more databases having data to be  
searched. {Figure 1}

*As per dependent Claim 7, Bowman teaches the limitations as follows:*

See Claims 4 and 6 rejections.

*As per dependent Claims 8 and 27, Bowman teaches the limitations as follows:*

The method of claim 1, wherein the step of mapping is performed offline  
prior to the step of receiving the second search query; and the step of substituting is  
performed online upon receiving the second search query. {Col 7 lines 60-65, the substituting  
step must inherently take place online in order for the query to be processed when it is  
submitted}

*As per dependent Claim 9 and 28, Bowman teaches the limitations as follows:*

The method of claim 1, wherein the step of rewriting the first search

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query into the modified search query comprises:

determining that the first search query is frequently received{Col 2 line 37-40, and Col 6 lines 34-37

issuing the first search query to the backend data system to find information related to the first search query;

determining additional content for the first search query based on the related information; and

rewriting the first search query into a modified search query having the first content and the additional content. {Col 13 line 63 – Col 14 line 12}

*As per dependent Claim 10 and 29, Bowman teaches the limitations as follows:*

determining a more common or popular phrase or term for the first content of the first search query; and

rewriting the first search query into the modeled search query having the more common or popular phrase or term in place of the first content{Col 7 lines 45-50}.

*As per dependent Claim 20, Bowman teaches the limitations as follows:*

See Col 5 line 37.

*As per dependent Claim 22 and 30, Bowman teaches the limitations as follows:*

See the Claims 9 and 28 rejection.

***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 11-19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bowman.

Claims 11-19 are rejected as Bowman teaches the claims upon which these claims are dependant, as well as teaching the system being implemented on one or more servers in col 5 lines 34-45, but fails to expressly disclose how the system could be implemented on disparate servers. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to integrate or separate the system into any combination of servers containing the different steps and components of the system. This is supported by *In re Larson*, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965), for making the components integral, and *In re Dulberg*, 289 F.2d 522, 523, 129 USPQ 348, 349 (CCPA 1961), for making the components separable. It would also have been obvious to one of ordinary skill in the art to make these separable to decrease the amount of load on a single server, and to make them integral to decrease the amount of delay in communications.

Claim 21 is rejected as although Bowman fails to expressly disclose the cache being on a disk storage. The examiner takes official notice that caches on disk storage were well known in the art at the time of the invention. Thus it would have been obvious to one of ordinary skill in

the art at the time of the invention to include this feature in cases where the size of the cache was large and would be expensive to implement on memory chips.

15. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bowman in view of U.S. patent No. 6,564,213 B1, known hereinafter as Ortega.

*As per claim 31, Bowman teaches as follows:*

receiving at a search interface a first search query having a first content; rewriting the first search query into a modified search query and mapping the first search query to the modified search query in a cache memory (see column 13, line 65 through column 14, line 15);

receiving a second search query having a second content;

determining whether at least a portion of the second content matches the first content;

responsive to the at least one portion of the second content matching the first content, substituting the modified search query for the at least one portion of the second content to form a modified second search query; and

issuing a search of the modified second search query having the substituted modified search query to return one or more search results as responsive to the received second search query (see column 6, lines 19-31 and Figure 1 item 133).

Bowman does not distinctly disclose

a) determining an indicator of frequency with which the first search query has been previously received at the search interface ;

b) when the first search query is determined, based on the indicator of frequency, to be among a group of most frequently received queries relative to other queries received at the search interface that are

different than the first search query, rewriting the first search query into a modified search query and mapping the first query to the modified search query.

Ortega teaches a) and b) see column 7, line 66 through column 8, line 19. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Bowman to include the teachings of Ortega because these teachings would allow popular queries to be rewritten as the user inputs the query into the search field.

### ***Response to Arguments***

16. Applicant's arguments filed 14 December 2007 have been fully considered but they are not persuasive.

In response to the applicant's arguments directed towards the rejection under 35 USC §101, the arguments have been considered, but are not deemed persuasive. Because the applicant is allowed to be his own lexicographer, a preamble that is statutory in one application can be not statutory in another case based on the definitions given to the words in the preamble by the specification. In this case the applicant has given the term "computer-readable medium" meaning that falls outside what is currently deemed statutory. See paragraph 0021 of the specification. Where an explicit definition is provided by the applicant for a term, that definition will control interpretation of the term as it is used in the claim. *Toro Co. v. White Consolidated Industries Inc.*, 199 F.3d 1295, 1301, 53 USPQ2d 1065, 1069 (Fed. Cir. 1999)

17. In response to the applicant's arguments that Bowman does not disclose "a first search query having a first content, comprising a plurality of components", the arguments have been considered, but are not deemed persuasive. Bowman clearly discloses receiving "multiple-term

queries”, see column 13, lines 24-29. The applicant’s claims may require a plurality of components, but the claims do not dictate how the plurality of components is rewritten into a modified search query. While the method of handling queries with a plurality of components may be different in Bowman than in the applicant’s specification, the difference is not currently evident from the claim limitations. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to the applicant’s arguments that Bowman does not disclose “substituting the modified search query for the at least one portion of the second content to form a modified second search query”, the arguments have been considered, but are not deemed persuasive. The applicant appears to take issue with the fact that Bowman requires the user to select the query from a list of modified search queries prior to the query being executed. However, since the applicant has used the term “comprising” which is an open ended transitional term, the claims are not limited to the steps recited. If Bowman requires the additional step of the user selecting the query to be issued before “issuing a search of the modified second search query”, Bowman still fully anticipates the claim. Further it is noted that in column 14, lines 25-32, an embodiment is discussed where the server automatically applies the top suggested modified query.

In response to the applicant’s arguments with respect to claim 31, the arguments have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure can be found on the form PTO-892 attached to this action.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob F. Betit whose telephone number is (571)272-4075. The examiner can normally be reached on Monday through Friday 10:30 am to 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571) 272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

jfb  
7 Mar 2008

/Charles Rones/  
Supervisory Patent Examiner, Art Unit 2164